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Testimony of The Nature Conservancy in New York Before the Joint Legislative Hearing on the Environmental Conservation Portions of the Executive Proposed Budget for New York State Fiscal Year 2020-21

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My name is Jessica Ottney Mahar, and I am the New York Policy and Strategy Director for The Nature Conservancy. On behalf of our 85,000 New York supporters from every region of the state, thank you for the opportunity to testify today regarding the Executive Budget Proposal for State Fiscal Year 2020-21 (FY 2020-21).

The Nature Conservancy in New York

The Nature Conservancy in New York is the state program of the world's largest conservation organization. Our mission is to conserve the lands and waters on which all life depends. We work in all 50 United States as well as in 79 countries and territories to protect nature for the benefit of people today and future generations. We have a collaborative, science-based approach to environmental problem-solving. We are engaged in scientific research, we are innovating new tools and approaches to address the most important environmental challenges: tackling climate change, protecting land and water, providing food and water sustainably and building healthy cities. We have our feet on the ground as land stewards for the 135 preserves – almost 200,000 acres -- we own in New York, and on a daily basis we work with all levels of governments, community groups, industry, and other stakeholders locally in New York and around the world to secure a more sustainable future.

Thank you for your dedication to conserving the natural resources New Yorkers depend on.

Last year was truly historic for New York's natural resources and our future generations who will depend on them. Most notably, the enactment of the Climate Leadership and Community Protection Act made New York a national leader and set our state on a course to confront the greatest challenge facing our planet and our people. The Nature Conservancy is enthusiastic about working with the new Climate Action Council and various advisory panels to contribute science and help shape policy that will advance the implementation of the goals within the Act.

Important commitments of funds in the FY 2019-20 budget for water infrastructure, the Environmental Protection Fund (EPF), capital programs in our State Parks System and at Department of Environmental Conservation (DEC) facilities protect clean water and air, provide recreational opportunities, improve quality of life, support good-paying jobs, and attract businesses and workers to our State.

This year's budget presents us new opportunities to make additional, historic commitments to our environment and build on the extraordinary foundation of environmental investment in New York that

the Legislature and Governor have been making. We ask for your support to build on that foundation by seizing these opportunities.

That foundation starts with the $300 million Environmental Protection Fund (EPF) – a longtime goal of our community – which has now been sustained at that level for four years and is proposed to continue for a fifth. It includes the Water Infrastructure Improvement Act, first spearheaded by the Legislature, which has grown from $400 million to a successful $3 billion program – and now another $500 million is proposed to provide essential funding for infrastructure upgrades and repairs and the protection of drinking water sources across New York. And it includes a long-term significant infusion of capital into our world-class State Parks system and Department of Environmental Conservation facilities that has improved public access to outdoor recreation, allowing more people to connect with nature.

In addition to continuing successes like the $300 million appropriation for the EPF, capital funding for environmental agencies, and the Water Infrastructure Improvement Program, this year's Executive Budget proposal includes a new and exciting opportunity to conserve our critically important natural resources and reduce flood risk to our communities through the first environmental bond act in nearly a quarter century. I respectfully ask that the Legislature support these proposals, and work with Governor Cuomo to make them even stronger during the budget negotiation process.

A $300 Million Environmental Protection Fund

The Nature Conservancy supports the appropriation of at least $300 million for the EPF in FY20-21, with an eye toward growing the Fund over time to $500 million. The EPF is the primary mechanism for protecting and conserving New York's iconic landscapes and natural resources. It has been a long-term and mostly steady and reliable source of funding to deal with threats, such as invasive species and water pollution, support community assets that enhance quality of life and drive economic activity, such as parks, zoos, and waterfronts. And it has provided the funding for initiatives such as open space conservation, farmland and forest protection, estuary programs, and oceans and great lakes restoration, ensuring that New York's great places remain available for future generations. While additional funding infusions through periodic bond measures, like the one proposed this year for the environment, are incredibly helpful and exciting, having this steady program funding is critical to the success of community-driven programs that conserve natural resources, enhance recreational opportunities and improve the lives and well-being of residents.

One of the most remarkable aspects of the EPF is, in fact, its broad reach. It touches down in every county of New York State. For municipal governments it provides funding for waterfront planning, parks, waste management and water infrastructure – important services taxpayers expect and require. For farmers it provides funding to help prevent runoff pollution and protect farmland from development pressures, often allowing future generations of farmers to continue family businesses. For other resource-dependent sectors including forestry and fishing, it ensures the sustainability and quality of New York's lands and waters to help keep those industries in our State. For outdoor enthusiasts, it supports stewardship of state lands, funds zoos and botanical gardens, and conserves land and water for all types of recreation from mountain biking, to bird-watching, to fishing, to just going for a walk in a beautiful place.

In sum, the EPF programs are a remarkable collective of initiatives that create jobs and generate revenue; support industries such as forestry, farming, outdoor recreation, and tourism; protect our

invaluable land and water resources; spur innovation; and directly support local government efforts to enhance quality of life in our communities.

Offload for Agency Staff Costs in the EPF

Governor Cuomo's proposed EPF appropriation includes language in each of the four EPF accounts that states, "Notwithstanding any other provision of law to the contrary, of the amounts appropriated herein, a portion may be used for the payment of personal service expenses incurred on or after April 1, 2020."

This language is an attempt to offload agency staff costs which should be paid by the operating budget into the EPF, a capital fund. The proposal, which would set a wholly unacceptable precedent for the EPF, would allow the unlimited use of EPF dollars to pay state agency salaries. Identical language was included in last year's Executive budget proposal and was rejected by the Legislature. The language was ultimately removed and not included in the FY2019-20 enacted budget.

The Nature Conservancy applauds the Legislature for their leadership in protecting the integrity of the EPF and urges that this flawed proposal once again be rejected. The EPF is needed for projects in communities. While we support the dedication of additional staff at our environmental agencies, we do not support offloading the costs into environmental project funds. This amounts to an environmental "shell game." We need more environmental funding in New York, not less.

RGGI Raid for EPF

There is a proposed $5 million transfer from the Regional Greenhouse Gas Initiative (RGGI) to the EPF in the Executive budget.[1] The Nature Conservancy does not support transferring money out of RGGI, which generates proceeds aimed at climate mitigation including renewable energy development and other emissions reductions program, to pay for the EPF. We strongly support New York making tackling climate change a top priority and were excited to see the Governor lead the State of the State and Budget Address with this topic, so it is surprising to simultaneously see a proposal that would divert RGGI funds to be used for other purposes. We urge the Legislature to reject this proposal. Environmental funding in New York needs to be focused in such a way that programs complement each other, and the budget should not shift funds via a backdoor from one program to pay for another.

Open Space Conservation

The Executive Budget proposes changes to funding levels of key programs in the EPF, some of concern to The Nature Conservancy and partners.[2] The Executive Budget proposal reduces the appropriation for open space conservation from $33 million to $30 million. This cut should be rejected.

Funding for land conservation was significantly higher when the EPF appropriation was lower – the open space line had $60 million in annual appropriations in a $255 million EPF. That funding recognized that protecting open space, a cornerstone of the state's conservation programming, is an incredibly effective way of achieving multiple goals: it is critical for water quality by protecting the sources of drinking water for communities; buffering communities from flooding and providing habitats for species which will shift in a changing climate; and is an effective way to mitigate climate change by using nature to sequester carbon. Unfortunately, as the EPF was restored from $177 million after the

[1] PPGG Article VII, p. 179, lines 16-22

[2] See EPF chart, Attachment 1 of this testimony.

deficit reduction program in 2009 up to $300 million four years ago, the open space line has not recovered, and as a result New York is sinking well below many other states in its commitment to protect the lands and waters that are the foundation of healthy communities. We urge the Legislature and Governor to focus on this problem, not assume that there are no consequences to the erosion of open space program reductions, recognize the important values of a robust land conservation program (including important climate mitigation and adaptation benefits), and recommit to this important program as budget negotiations continue.

A bright note in the open space program is this year's Executive proposal for a new $3 million Land Trust conservation easement program. The Nature Conservancy strongly supports this program, in addition to the $2.5 million allocation for the Land Trust Alliance Conservation Partnership Program, and urges the Legislature to support both of these allocations. We are lucky in New York to have a strong community of land trust organizations, many of which are accredited by the Land Trust Accreditation Commission, which ensures they are doing valuable conservation work using practices that meet the highest ethical and business standards. Working with local and state governments and private landowners, these land trusts are working to conserve important natural resources in communities for future generations.

The Land Trust conservation easement program will provide grants on a competitive basis to support land trust acquisitions of permanent conservation easements on forest lands from willing landowners. With 75% of New York's forests in private ownership, it is important to create a program complementary to the state's Farmland Protection Program. Through this program, land trusts will use their expertise and deep roots in communities to identify and conserve important forests, with approval and support from the state. This funding will leverage New York's land trusts to accelerate the pace of permanent forest land conservation and secure the myriad of benefits these forests provide us.

Cut to Zoos, Botanical Gardens and Aquaria Program

The Executive budget proposes a $2 million reduction to the Zoos, Botanical Gardens and Aquaria (ZBGA) program. The Nature Conservancy opposes this cut. ZBGA funding is critically important to institutions across the state, including The Nature Conservancy, in carrying out missions related to caring for living species, educating the public about our environment, and providing people access to nature and experiences with plants and animals. We urge the Legislature to restore the ZBGA program to $16 million, which is the appropriation it received in FY 2019-20.

State Land Stewardship Funding

The Nature Conservancy supports increasing funding within the EPF for State Land Stewardship. As an organization that has worked with the State to add important lands and waters to our State Parks and Forest Preserves, we would hope that DEC and OPRHP receive the funding necessary to ensure these natural resources are properly cared for and that people can safely and appropriately access them where the resources can sustain such access.

Within the State Land Stewardship program, the Executive Budget includes a new proposed funding allocation of $55,000 for the New York Natural Heritage Program to update the New York Protected Areas Database (NYPAD). This funding allocation, while seemingly small, is incredibly important for effective natural resources conservation. The Nature Conservancy strongly urges the Legislature to support this sub-allocation. NYPAD is a spatial database of lands protected, designated, or functioning

as open space, natural areas, conservation lands, or recreational areas.[3] NYPAD was created and is maintained by the NY Natural Heritage Program.[4] NYPAD is a popular product, and there is a need to continue updating it and expanding its contents.

New York State requires foundational data about protected areas found in NYPAD to inform a variety of programs. A modest investment of resources in making sure this data is updated and maintained is important. By updating NYPAD and committing to maintain this data, the New York State and non-governmental partners including conservation organizations can establish shared goals and metrics for land protection. In addition, this data is important in other program work that New York State and partners are engaged in or seeking to undertake. For example, the deployment of renewable energy and energy transmission siting, which should be accelerating under the recently enacted Climate Leadership and Community Protection Act. Protected lands should be used as a layer to exclude areas from being developed. Having accurate and complete data is essential for planning efforts to be effective.

Environmental Protection Fund Spending

When the annual EPF appropriation increased significantly from $177 million to $300 million, there was an acknowledgement on the part of both the Cuomo Administration and the stakeholders that there would be a lag between the level of annual disbursements and the appropriation while programs ramped up until spending would eventually match the appropriation. The financial plan has projected this "ramp up" in the last three fiscal years and has seemed to indicate a trajectory towards spending the full $300 million.

CHART: EPF Appropriations, Disbursements FY11-12 – FY19-20[5]

SFY	**Appropriation** (millions)	**Disbursements** (millions)	**% approp actually disbursed**	**Financial Plan Estimated Disbursement** (millions)	**% estimate actually disbursed**
2011-12	134	148.6	111%	133.5	111%
2012-13	134	153.1	114%	133.5	115%
2013-14	153	152.9	100%	153	100%
2014-15	162	139.5	86%	156.5	89%
2015-16	177	170.4	96%	171.7	99%
2016-17	300	195.7	65%	200	98%
2017-18	300	182.2	61%	216	84%
2018-19	300	218.4	73%	232.3	94%
2019-20	300	*127.7	---	255.3	---

*NOTE: *127.7 is YTD disbursement for FY19-20.*

While there was a lag in spending during FY17-18 that concerned us, that lag did not bear out to become a trend, and in fact in FY18-19 spending picked back up with 94% of projected disbursements realized. The financial plan for FY20-21 shows continued growth in spending, trending upwards

[3] http://www.nypad.org

[4] https://www.dec.ny.gov/animals/29338.html

[5] Data sources: NYS Financial Plans: https://www.budget.ny.gov/pubs/archive/index.html; OSC Monthly Reports on State Funds Cash Basis of Accounting: https://www.osc.state.ny.us/finance/pmcbr.htm

towards the $300 million goal, however falling just short of reaching it over the course of the five-year plan forecast period. It is encouraging to see this trend in upward EPF spending, especially as the financial plan also anticipates spending from the proposed environmental bond act, which will require focus from the same agencies to move contracts and project agreements.

Environmental Bond Act

The Nature Conservancy believes the proposed environmental bond act presents this Legislature and Governor a once-in-a-generation opportunity to leverage state and local work, and make an extraordinarily important investment to protect the natural resources we depend on, as well as reduce flood risk as communities deal with extreme weather and prepare for a changing climate. We are enthusiastic about the opportunity to work with the Governor, Legislature, conservation partners, and stakeholders from the municipal, business, labor and other sectors to pass the first environmental bond act in 24 years. Based on our work on conservation campaigns in New York and nationally, we believe voters will ultimately support such a measure, if carefully crafted.

Throughout the country, The Nature Conservancy has been working with state governments and municipalities to pass voter approved measures to fund conservation. These measures are often approved by large margins, with bi-partisan support. States large and small have been asking voters to support conservation investment over the last three statewide election cycles, and votes have consistently been supporting these proposals.

Statewide Election	**State**	**Environmental funding approved by voters**
2018	California	$2 billion (parks)
2018	California	$2 billion (watersheds)
2018	Georgia	$200 million
2018	Rhode Island	$47 million
2016	Rhode Island	$35 million
2014	Florida	$18 billion
2014	California	$7.5 billion
2014	New Jersey	$2.8 billion
2014	Rhode Island	$53 million
2014	Maine	$10 million

We applaud Governor Cuomo for proposing an environmental bond act to complement and leverage other, important sources of environmental funding in our state budget, including but not limited to the Environmental Protection Fund, Water Infrastructure Improvement Act, and capital funding programs for DEC and State Parks. Together these funds can put New York on a path to achieving its environmental goals, and ensure that we have the ability to conserve important lands, waters and community assets that future generations need to thrive, while adjusting the way our communities are shaped in to withstand the impacts of climate change.

What we have learned from working on many of these campaigns in states and localities around the country is that **voters support measures that are well-crafted, with clearly articulated purpose; accountable, with transparent and well-defined programs; and ballot language is simple and understandable**.

The Governor's proposal for an Environmental Bond Act of 2020 "Restore Mother Nature" is to spend $3 billion for a variety of important programs and purposes including habitat restoration, flood risk reduction including wetland, floodplain and stream restoration and protection, land conservation, forest preservation, right-sizing culverts and dam removal, water quality improvement, infrastructure to support outdoor recreation, and climate mitigation programs.

The Nature Conservancy strongly supports many of these purposes. The proposal, however, requires additional work to further define various programs, and to delineate the allocation within the $3 billion among the programs. As such refinements are made, it will be important to understand how these programs will leverage and intersect with other funds, and where duplication may or may not be proposed. For instance, we have a now $3.5 billion Water Infrastructure Investment Act for water infrastructure upgrades and water quality improvement. What purposes will the monies allocated for these purposes in the Bond Act be used for? How will this program be different or leverage other funds including WIIA and the Clean Water and Drinking Water State Revolving Loan Funds?

The Nature Conservancy hopes the focus of this Bond Act will be on programs that conserve and restore natural resources and wildlife habitat, and help communities reduce risk from extreme weather impacts brought on by climate change – most notably flooding and urban heat. Throughout the state, The Nature Conservancy has been working with communities to plan for a climate changing future, and believes there are key programs and projects that can be prioritized to reduce risk of flooding in communities, and in many cases these projects will also create co-benefits for communities such as restoring wildlife habitat and creating new recreational opportunities. Our approach for this work is outlined in Attachment 2 below, in our flood risk reduction hierarchy. We suggest this be the basis of guiding principles for programs aimed at flood risk reduction in the Bond Act.

Our flood risk reduction hierarchy is informed by years of work with communities throughout the state on this issue. For example, in Mastic Beach on Long Island, even without a storm, the community is having flooding. As sea level rises, it's only going to get worse. And, as the water comes, the groundwater table rises at the same rate. People are already having trouble using their indoor plumbing during high tides. One resident our team met kept a tide chart in the bathroom of their home to determine when flushing would be functional. Some residents in the community have already decided to leave, and in some cases, The Nature Conservancy has worked with support from government programs, to acquire these properties. Using our "land trust" expertise, we are able to support the landowners in their desire to relocate, and instead of having the property sold to a buyer set up for the same problems, following the sale the structures are removed from the property and the area is restored to wetland habitat. This provides a buffer for surrounding properties. Similar projects are underway in Staten Island, where residents impacted by Superstorm Sandy are relocating and properties will become part of the New York City Bluebelt and parks systems.

In the Southern Tier, our team worked with the Southern Tier Central Regional Planning & Development Board, Steuben County and the University of Buffalo to help towns along the Cohocton River identify the best ways to prevent flooding in their communities through our "Flood Smart" Program.[6] At a workshop in Bath, nearly 50 attendees discussed everything from residents who are particularly at-risk, to facilities that can serve as emergency shelters, to roads and bridges that provide

[6] https://www.nature.org/en-us/about-us/where-we-work/united-states/new-york/stories-in-new-york/new-york-flood-smart-communities/

vital connections during crises, to wetlands that play a critical role in protecting communities. The group then identified four shared priorities across the entire reach of the Cohocton: improving local land-use laws; protecting public infrastructure like levees, roads, bridges and water systems; coordinating emergency response; and protecting and better managing wetlands, floodplains, and storm water. They are now in a position to begin working on projects on the ground in their communities to realize the vision they created.

And, in the Adirondacks, our team has worked with town, county and state transportation agencies and partners in the region to redesign and rebuild culverts – the areas where roads cross streams – in order to reduce flooding during storms and unlock hundreds of miles of valuable trout habitat.[7],[8] These 'right sizing' upgrades can save localities money and lives when extreme weather hits – like Hurricanes Irene and Lee – where flooding caused culverts to blow out roadways, in some cases blocking the only route to travel from one place to another, cutting off access to emergency services, food, and other necessities for residents. The Nature Conservancy, DEC, Soil and Water Conservation Districts and other organizations have been working to prioritize culverts that should be upgraded in various regions throughout the state, where multiple benefits including public safety and natural resources can be achieved. These prioritizations can be used to implement a program that could be funded by the Bond Act.

In the Hudson Valley, The Nature Conservancy worked with partners including the US Army Corps of Engineers, DEC Hudson River Estuary Program, other state and federal agencies and conservation and community organizations in the region to create the Hudson River Comprehensive Restoration Plan.[9] This Plan details the current conditions of the Hudson River estuary, identifies potential restoration sites and recognizes the needs that must be addressed in the coming decades to restore the river and prepare for future conditions, including rising sea levels and increasingly frequent and severe storms. This assessment of the estuary can help inform and guide spending from the Bond Act in that region, as it includes a "mapper" of community-identified projects, many of which fit squarely within the goals articulated for restoring natural resources and reducing flooding.[10]

Following the Governor's September announcement of his intention to create a new "Revive Mother Nature" initiative, before it became a Bond Act proposal, The Nature Conservancy conveyed these and other ideas to the Executive for consideration. That material is included in Attachment 3 of this testimony for your reference.

The ballot question for the bond act included in the Article VII language[11] needs to be amended during the budget negotiation process. The language as proposed is not clear and uses terms like "resiliency" and "natural restoration" that are vague and may not resonate with voters. The Nature Conservancy has conducted national public opinion research and focus groups on effective language to convey these principles to the public, has experience helping to create winning proposals in other states, and would be happy to meet with interested parties to discuss ballot language that has proven to be

[7] https://www.ausableriver.org/blog/safe-passage
[8] https://www.youtube.com/watch?v=vWtVFsOOFW8
[9] http://thehudsonweshare.org/
[10] https://s3-us-west-1.amazonaws.com/nascience/apps/hudson-river/index.html
[11] TED Article VII legislation p. 306 lines 4-9

effective. Further, the name of the bond measure may need to be adjusted to more directly convey the purpose of the measure to voters.

Funding for Water Quality

Last year we advocated in support of the addition of $500 million to the Water Infrastructure Improvement Act, bringing total support for the program to $3 billion. We thank you for continuing to support investment in our state's water infrastructure and programs to safeguard our water resources. The FY20-21 Executive budget proposal would add another $500 million to this program, aimed at leveraging federal, local and private funds available to municipalities to upgrade or repair waste and drinking water infrastructure, upgrade failing septic systems, protect the sources of our drinking water and undertake other critical projects to improve water quality throughout the State.

A decade ago, DEC released a report indicating more than $36 billion was needed to repair New York's aging wastewater infrastructure.[12] Notably, that report expressly did not take into account the impacts of climate change, which add to this need. The State Comptroller has released a report more recently detailing nearly $40 billion in needs just for drinking water systems across New York State.[13] Collectively this is the infrastructure that provides clean drinking water to people, and ensures that sewage is properly treated, and is relied on by all citizens of New York State. As with the report about wastewater infrastructure, the report quantifying needs for drinking water infrastructure did not contemplate issues associated with the impact of emerging contaminants that are now being found in New York's waters, and requiring municipalities to spend on new treatment systems or even tie in to new water supplies.

The commitments made by the Legislature and Governor in recent years through the appropriation of $3 billion for the New York Water Infrastructure Improvement Act, which until this year's budget proposal was larger than any environmental bond act, is critical if we are to ensure future generations of New Yorkers have access to clean, safe drinking water and effective wastewater disposal. So, while we contemplate the authorization of a new environmental bond act, we must also commit to continuing to appropriate funds to this critically important program.

The Nature Conservancy remains enthusiastic about the program's emphasis on both water infrastructure funding, and funding for green infrastructure and source water protection. We believe these are essential components to the program. In the appropriation of $500 million for FY20-21, we suggest the following purposes be added, which will incentivize intermunicipal agreements that prioritize water resources holistically, ensure modern data systems are in place and accessible to the public and water managers, and support work of Soil and Water Conservation Districts in reducing nutrient pollution in waterways through effective methodology being used currently in the Finger Lakes region.

- <u>For projects that integrate the management of source water, drinking water, and wastewater for a shared watershed or catchment basin within any regional planning entity, inter-municipal agreement, a joint operating agreement, or approved substitute, to raise water quality standards, reduce nutrients and other pollutants released into the environment, and to increase government efficiency and accountability.</u>

[12] https://www.dec.ny.gov/docs/water_pdf/infrastructurerpt.pdf
[13] https://www.osc.state.ny.us/localgov/pubs/research/drinkingwatersystems.pdf

- For the development of water data infrastructure for state-wide sharing, integration, and dissemination of public data to support the sustainable management of water pursuant to section 3-0315 of the environmental conservation law.

- Existing language: "For state assistance payments, services, and expenses to soil and water conservation districts for the cost of water quality protection projects awarded on a competitive basis prioritizing financial need and hardship, intended to assist concentrated animal feeding operations;"
    - ADD: and for the implementation of behavior science research and related program improvements to accelerate the adoption and full implementation of Agricultural Environmental Management programs.

Capital Funding for State Agencies

Governor Cuomo's budget proposes continued capital investments in State Parks including $110 million for the Parks 2020 Initiative. It also includes a proposed $55 million for capital projects at the Department of Environmental Conservation, aimed at upgrading DEC recreational and state land facilities, air monitoring infrastructure, and other important projects that allow the agency to successfully implement its mission of conserving natural resources and protecting public health. The Nature Conservancy supports these capital investments in our state's outdoor recreational facilities, which provide the public abundant, safe and exciting new ways to connect with nature, and draw tourists to New York to enjoy our natural resources. With an $800 million outdoor recreation industry in our State that employs more than 13,000 people, these investments benefit our economy and our environment.

Wetlands Conservation: TED Article VII, Part TT

The Executive budget proposal repeals the jurisdictional function of wetland maps in New York State. The Nature Conservancy supports this proposal as an important first step in increasing wetlands protections in our state, which is especially timely and important as the US Environmental Protection Agency has now rolled back the "Waters of the United States" ruling, a rollback aimed at reducing wetlands protections from the federal level. We urge the Legislature to give this proposal the serious consideration it deserves, and work with the Governor to enact wetlands protections in this budget.

Currently DEC only regulates wetlands that are 12.4 acres or larger, and smaller-sized wetlands that are deemed unusually important. For years many conservation and environmental organizations including The Nature Conservancy have been advocating for the protection of unmapped wetlands, or to have the DEC official maps updated. When new areas have been mapped, the updated maps have languished for years in the amendment process. For example, it is our understanding that there are currently 50,000 acres of unreleased maps for wetlands in the Wallkill, Genesee, and Oswego watersheds.

The legislation proposed in the Executive budget changes the function of these maps so that they are educational, and redefines wetlands as areas having wetland qualities, such as key plants and/or soils. It then makes clear those areas are within the jurisdiction of the DEC if larger than 12.4 acres or a Unusual Local Important area. These changes are a vast improvement to the currently outdated system, will allow for more protection of wetlands, and will benefit both people and nature.

Why are wetlands important? First, they provided important habitat for birds, amphibians and other wildlife. Second, from a human perspective, wetlands hold a lot of water. This means that when we experience extreme weather – the big storms that our state is confronting more and more regularly –

our wetlands act as a natural “sponge” which can hold that water and help reduce flooding in our communities. As we develop our communities, conserving wetland areas can help reduce flood impacts and damages, and reduce risk to people from storms.

Conclusion

Thank you again for the opportunity to testify before you today on the proposed SFY2020-21 budget. The Nature Conservancy is proud to be working in New York, we are proud to be working directly with many of you, and we are proud of our partnerships with New York State. As a global organization we have a broad perspective, and in New York we are acutely aware of our State’s historic role as an environmental leader. Through this budget, New York has the opportunity to continue that tradition of environmental leadership, which the nation needs right now. The progress we make in this budget can help ensure future generations of New Yorkers are able to drink clean water, breathe healthy air, and live prosperous lives. We look forward to working with you throughout the remainder of the budget process and stand ready to bring the resources of our organization to the table as may be helpful.

For More Information Contact:

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For more information about The Nature Conservancy’s work in New York, visit www.nature.org/ny.

Attachments:

1. EPF chart
2. Flood risk reduction hierarchy
3. Bond Act Priorities

Attachment 1: Chart of Environmental Protection Fund (EPF) FY20-21 Executive Proposal

Open Space Account	**FY19-20 Enacted**	**FY20-21 Executive Proposed**
Open Space / Land Conservation	33,087	30,000
LTA Conservation Partnership Grant Program	*2,500*	*2,500*
Urban Forestry	*1,000*	*1,000*
Cities with Population 65,000 or more	*500*	*500*
Projects in DEC Regions 1-3	*3,000*	*3,000*
LTA Conservation Easement Program	*0*	*3,000*
Lake George Park Commission	*200*	*200*
Farmland Protection	18,000	17,000
Tug Hill Tomorrow for Ft. Drum ACUB	*1,000*	*1,000*
Cornell University Land Class/Master Soils List	*90*	*95*
Agricultural Waste Management	1,500	1,500
Cornell Dairy Acceleration Program	*700*	*700*
Municipal Non-point Source Pollution Control	7,000	6,000
Cornell Community Integrated Pest Management	*550*	*550*
Agricultural Non-point Source Pollution Control	18,000	18,000
Cornell Integrated Pest Management Program	*1,000*	*1,000*
Suffolk County Cornell Cooperative Nutrient Management	*500*	*500*
Cornell Pesticide Management Education Program	*250*	*250*
Hudson River Estuary Program	6,500	6,500
Mohawk River Action Plan	*1,000*	*1,000*
Biodiversity / Landowner Habitat Conservation Program	1,350	1,350
Pollinator Protection Plan Implementation	*500*	*500*
Cornell Pollinator BMPs	*300*	*300*
Cary Institute of Ecosystem Studies Catskill Research	*150*	*100*
Albany Pine Bush Commission	2,675	2,675
Long Island Pine Barrens Commission	2,000	2,000
Long Island South Shore Estuary Reserve	900	900
Finger Lakes/Lake Ontario Watershed Protection Alliance	2,300	2,300
Lake Erie Watershed Protection / Erie Co. SWCD	250	250
Invasive Species	13,300	13,300
Lake George	*450*	*450*
Eradication Grants	*6,050*	*6,050*
Cornell Hemlock Wooly Adelgid project	*500*	*500*
Cornell Plant Certification Program	*120*	*120*
Southern Pine Beetle incl. Rx Fire in Pine Barrens	*500*	*500*
Cornell Golden Nematode	*0*	*62*
Ocean and Great Lakes Initiative	17,250	19,750
Peconic Estuary Program	*200*	*200*
Great Lakes Commission	*60*	*60*
Water Quality Improvement Program	17,750	19,000

Suffolk County / DEC Nitrogen Reduction	*3,000*	*3,000*
Suffolk County Sewer Improvement Projects	*1,500*	*1,500*
Nassau County Bay Park STP, well testing & LINAP	*5,000*	*5,000*
Statewide Drug Collection Program	*1,000*	*0*
Fire Department Disposal of PFCs	*100*	*0*
Source Water Assessment Plans	*5,000*	*5,000*
Town of Hempstead Marine Laboratory improvements	*350*	*0*
Chautauqua Lake Partnership	*0*	*95*
Chautauqua Lake Association	*0*	*150*
Soil and Water Conservation Districts	10,500	10,500
Water Resources Commissions	1,063	1,085
Susquehanna River Basin Commission	*259*	*259*
Delaware River Basin Commission	*359*	*359*
Ohio River Basin Commission	*14*	*14*
Interstate Environmental Commission	*41*	*42*
New England Interstate Commission	*38*	*38*
SUNY ESF Center for Native Peoples and the Environment	*350*	*373*
Sub-Total	**153,425**	**152,110**
Parks and Recreation Account		
State Land Stewardship	33,000	36,000
ORDA/Belleayre Mountain	*1,000*	*1,000*
Parks & Trails NY Grants Program	*1,000*	*1,000*
Essex County Overuse	*0*	*1,200*
Adirondack Architectural Heritage Camp Santanoni Restoration	*0*	*250*
NY Natural Heritage Program Protected Areas Database	*0*	*55*
Waterfront Revitalization Program	14,500	14,500
Inner City/Underserved	*9,000*	*9,000*
LWRP Updates to mitigate climate risks	*2,000*	*2,000*
Niagara River Greenway Commission	*200*	*200*
Municipal Parks	19,500	19,500
Inner City/Underserved	*10,000*	*10,000*
Tivoli Park	*250*	*250*
Hudson River Valley Trail Grants	*500*	*500*
New York City East River Esplanade	*500*	*0*
SUNY ESF for Adirondack VICs	*120*	*120*
Paul Smiths for Adirondack VICs	*180*	*180*
NYC East River Esplanade 107th St. Pier	*1,000*	*0*
Catskill Center for Conservation and Development VIC	*0*	*150*
Hudson River Park	3,200	3,200
ZBGA	16,000	14,000
Navigation Law	2,000	2,000
Sub-Total	**88,200**	**89,200**

Solid Waste Account		
Municipal Recycling	14,000	14,750
Organics/Food Waste Programs	*2,000*	*2,000*
Secondary Materials Markets	200	200
Pollution Prevention Institute	4,000	4,000
Interstate Chemical Clearinghouse	*100*	*100*
Pesticide Program	1,800	1,800
Long Island Pesticide Prevention	*200*	*200*
Natural Resource Damage Assessment	2,025	2,025
Landrill Closure / Gas Management	700	765
Essex County	*300*	*0*
Hamilton County	*150*	*0*
Environmental Justice	7,000	7,000
Community Impact Grants Program	*3,000*	*3,000*
Connect Kids Outdoor Recreation Program	*1,000*	*2,000*
Adirondack North Country Association Diversity Initiative	*250*	*250*
Environmental Health	6,500	6,500
Childrens Environmental Health Centers	*2,000*	*2,000*
Fresh Connect	*625*	*625*
SUNY 1-4 Dioxane Treatment Pilot	*1,000*	*1,000*
Clean Sweep	*500*	*500*
Brownfield Opportunity Area Grants	1,500	2,000
Sub-Total	**37,725**	**39,040**
Climate Change Mitigation and Adaptation Account		
Greenhouse Gas Reduction Outside Power Sector	1,500	1,500
Regenerate NY grant program	*500*	*500*
Cornell Natural & Working Lands Ag Inventory	*500*	*500*
Climate Adaptation	2,000	1,000
Wood Products Development Council	*200*	*200*
Smart Growth Grants	2,000	2,000
Climate Resilient Farms	4,500	4,500
Cornell Soil Health Program	*200*	*200*
Hudson Valley Carbon Farming Pilot Project	400	0
Climate Smart Communities Projects	10,650	10,650
Resilience Planting Program	*500*	*500*
Community Forests Program	*0*	*500*
Sub-Total	**20,650**	**19,650**
TOTAL EPF	**300,000**	**300,000**

000s omitted. Programs in italics are sub-allocations within programs.

ATTACHMENT 2: The Nature Conservancy Flood Risk Reduction Hierarchy

There are many ways New Yorkers need to adapt to a changing climate. When looking across all climate change impacts, flooding rises to the top as having the greatest impact on people and nature. It is pervasive across New York; every single county has experienced severe storms and some kind of flood 'disaster' since 2010, and this is expected to continue. New York ranks third in the US for most homes at risk from flooding from sea level rise.

The Nature Conservancy is working in New York with local, state and federal government officials, communities, stakeholders and partner organizations to adapt to climate change, focusing on planning, program design and projects that will be effective in a future that: makes way for water; keeps people safe from flooding, ensures infrastructure systems are resilient, and allows nature to adapt. If people and places are getting flooded now, or are dealing with problems associated with flooding, then they will most certainly be dealing with flooding in the future, and likely in a disproportionate manner that may result in or exacerbate social vulnerability.

To achieve these goals, The Nature Conservancy suggests the following approach to reduce risk to flooding. This new approach is a flood risk reduction hierarchy (Figure 1).

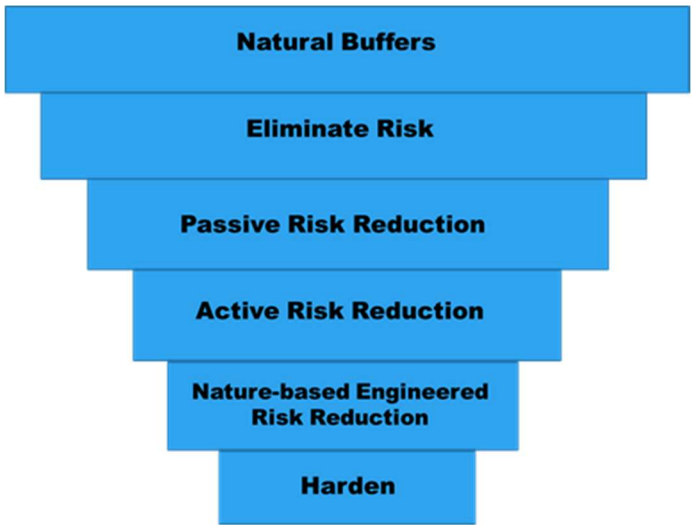


Figure 1. Flood Risk Reduction Hierarchy.

The three highest priorities of the hierarchy are to allow nature and people to adapt and be resilient over the long-term. The highest preference is to protect shorelines and floodplains from new development and restore nature to create natural buffers wherever possible. Where it is not possible, the next step in the hierarchy is to eliminate risk by assisting willing people with moving, relocating infrastructure out of harm's way from flooding, and restoring nature in those locations to create buffers. Recognizing that moving people and infrastructure out of flood zones will not be possible everywhere, the next step in the hierarchy is to promote passive risk reduction by making infrastructure more resilient to withstand temporary inundation.

The challenge is to stay focused on actions that promote long-term flood resilience; opportunities exist pre-and post-disaster through government and non-government partnerships.

Flood Risk Reduction Hierarchy

The primary approach should focus on planning, programs and projects that will achieve long-term flood-risk reduction and climate change "resilience" for nature and people. The highest preference should be given to projects that protect natural buffers or restore natural resources that can act as buffers wherever possible. Where that is not possible, the prioritized goal should shift to making way for water by moving (willing) people out of harm's way and relocating vulnerable infrastructure. We recognize this will not be possible everywhere. Furthermore, should programs like these be implemented, equity issues must be prioritized and addressed during program design. Below is a "hierarchy" that outlines a stepwise approach for consideration of options, which is similar to the concept of a "mitigation hierarchy" employed for the National Environmental Policy Act and the Endangered Species Act.

1. **Protect new and existing natural buffers:** Prevent new development in floodplains including new shoreline hardening and protect natural shorelines and undeveloped floodplains.

2. **Eliminate risk**: Employ managed retreat of people and infrastructure to appropriate receiving areas and restore nature; complete removal and relocation (if needed) of infrastructure from the floodplain.

3. **Passive risk reduction**: Implement resilient infrastructure redesign and renovation that manages for temporary periods of inundation; elevate structures and utilities, restore and/or expand buffer areas, etc.

4. **Active risk reduction**: Remove temporary infrastructure during forecasted periods of inundation.

5. **Nature-based engineered risk reduction**: Emulate appropriate natural features to form protective buffers around systems (one example is an underwater constructed sill with oysters growing on it).

6. **Harden**: Build walls and other approaches to defend systems in place relative to design specifications; limited lifespan and a fixed level of protection.

Attachment 3: Bond Act Priorities

Habitat Connectivity and Community Resilience

- **Right-size culverts.** By completing the state prioritization of culverts that should be replaced, NYSDEC and NYSDOT can find key places where flooding can be mitigated, and where new culvert designs can increase public safety and unlock important fish habitat. We have modeled this with communities in the Adirondacks, resulting in more resilient transportation, public safety enhancements, and hundreds of miles of new trout habitat. Mapping and prioritization has been done in the Hudson Valley by The Nature Conservancy for NYSDEC. Additional mapping and prioritization is underway, but should be completed statewide, and then dedicated funding and design standards should be deployed to upgrade priority culverts. See information at the end of this document about a project for the Champlain watershed, and prioritizations of freshwater culverts for Long Island.

- **Remove dams.** Create a New York State dam removal program aimed at eliminating environmentally problematic and/or functionally obsolete dams. Ensure there is adequate funding to eliminate priority dams, including agency resources to facilitate the permitting process which can be complicated for these projects.

- **Restore marshes.** Initiate a large-scale marsh restoration program focused primarily on two types of restoration approaches: restoring hydrology and restoring elevation. This type of work is under-resourced in New York, despite the many benefits of tidal saltmarshes, from wildlife habitat to community resilience. Several organizations are well positioned to undertake this important work as funding becomes available. The Nature Conservancy has several projects already identified. Suffolk County created a list of 21 properties on the south shore after Superstorm Sandy that were potential candidates for restoration. (See images with sites mapped at the end of this document). The NYSDEC has completed design plans for restoration at their marsh property at Fireplace Neck, but funding is required to implement the project. New York City Parks has had a very active marsh restoration program and has a list of potential marsh restoration projects that new funding could actuate. (See list at end of this document.)

    - Restoring hydrology: Tidal saltmarshes function by virtue of the tide coming in and going out. However, tidal restrictions - sometimes in the form of undersized culverts, but also in the less obvious form of miniature levees along linear mosquito ditches, compromise the delivery of ecosystem services and the long-term viability of the marshes because they negatively impact the growth of marsh grasses and its ability to grow vertically to keep pace with sea level rise. This phenomenon is frequently observed on marshes in New York where the linear grid ditching has restricted the grass to just the edges of the ditches such that the marshes resemble waffles filled with maple syrup because the centers of the marsh panels are constantly flooded or shallow bare mud areas called pannes. Restoration of hydrology and increased drainage can be achieved through minimally invasive shallow creek or runnel excavation to reverse the negative consequences of linear mosquito ditching. This restoration approach strives to return the natural rise and fall of the tides to the marsh platform and thereby restore healthy native marsh vegetation to the unvegetated pannes between the ditches that are also the mosquito breeding hotspots targeted by vector control agencies.

    - Restoring elevation: The second major restoration approach uses sediment addition (both beneficial use of dredge material and purchased clean sand) to restore elevation within unvegetated marsh pannes or larger subsided areas of marsh to the elevations at which they could support marsh vegetation and become self-sustaining. Elevation enhancement

can happen through thin layer spraying as well as through more labor intensive movement of sediment additions with machinery on the marsh surface.

- **Implement the Hudson River Comprehensive Restoration Plan Projects.** In 2018 a diverse group of stakeholders released the Hudson River Comprehensive Restoration Plan. The Plan contains a first of its kind assessment of the current conditions of the Hudson River estuary, identifies potential restoration sites, and recognizes the needs that must be addressed in the coming decades to restore the river and prepare for future conditions, including rising sea levels and increasingly frequent and severe storms.

  This assessment of the estuary was prepared for the purpose of informing and guiding management and conservation actions for decades to come. The process that was used to develop the plan, and community meetings that followed, have produced volumes of data, including lists of restoration projects necessary to fulfill the goals of the Plan. You can view the Plan and community project priorities online at www.thehudsonweshare.org. The "mapper" tool points to locations of projects already identified by stakeholders throughout the Hudson Valley that would achieve the goals of "Revive Mother Nature."

  Specifically, The Nature Conservancy would like to call your attention to the following projects which we believe are ripe for consideration as funding priorities in the Hudson Valley Region:

  - **Henry Hudson Park Shoreline:** This project is under consideration by the Town of Bethlehem, NYS DEC Hudson River Estuary Program and the US Army Corps of Engineers under the "Hudson River Habitat Restoration Feasibility Study." This would consist of raising a wastewater treatment plan effluent pipe, restoring nearly 2,000 feet of shoreline and, hopefully, retrofitting existing road and parking lot configurations.

  - **Schodak Island State Park:** This project would restore more than 2,000 feet of shoreline and restore wetlands allowing for marsh migration at the site.

  - **Tidal Culverts and Bridges:** These barriers were mentioned above, and as mentioned a prioritization has been done in the Hudson Valley Region. There are hundreds of culverts and bridges on the Hudson We Share Project Opportunity Map. We are aware our partners from the region, Scenic Hudson and Riverkeeper, have advanced proposals related to culverts and bridges as well, and support focusing on these infrastructure issues in the region for the benefit of both people and nature.

  - **Freer Park, Esopus, NY:** We support the significant shoreline restoration project submitted by our partners at Scenic Hudson.

  - **Route 9G, Hudson, NY:** The State road berm currently floods as it transects a significant supra-tidal wetland south of Hudson, NY. Raising or reconfiguring the existing road to support marsh migration and eliminate roadway flooding would also benefit target fish populations, improve water quality, and reduce human risk to flooding.

Land and Water Conservation

- **Conserve open space including floodplains, wetlands and water.** Funding for open space conservation, including coastal and freshwater wetlands should be prioritized. These funds were once $60 million annually through the Environmental Protection Fund (EPF), augmented by funding from Bond Acts. As discussed in our budget testimony, New York is lagging behind on conservation funding, and this Bond Act providing an infusion of much needed capital will be helpful.

  One thing to be mindful of is program function. In the current state source water protection program under the Water Infrastructure Improvement Act (WIIA), there has been some difficulty in program function according to land trusts participating in the program. Should source water protect also be a priority for Bond Act funds for land conservation, it will be important to work with stakeholders to understand how the new program may be structured to be most successful, and what may be learned to improve upon the current program being administered with funding from WIIA.

- **Protect farmland and support funding for projects that reduce nutrient pollution from farms into New York's waters**, including but not limited to the establishment of riparian buffers. This will protect aquatic habitat from nutrient pollution and increase resilience of farmlands to flooding. Ensure program requirements call for the creation of these buffers.

- **Make way for water and restore natural systems to enhance community resilience and reduce flood risk.** Establish a state funded program to create a buy-out option for at-risk and repetitive loss properties, coupled with a restoration program to create natural buffers for communities facing more frequent storm impacts as our climate changes. This will increase resilience to climate change and storm impacts while also restoring important coastal and riparian habitats. These floodplains are critical pathways for wetland migration in the face of climate change, and occupied by homeowners seeking buyouts so they can move to higher ground. Focusing the program in these areas would improve water quality, restore coastal habitat and marine life, and boost coastal resilience. Similar recommendations were made in the forward looking 2100 Commission report that was created after Superstorm Sandy.

  Focus flood risk reduction work using the mitigation hierarchy in Attachment 2, where key early priorities are protecting in-tact floodplains and restoring areas that can be restored. Using natural systems as a first line to absorb water is a smart solution for communities. The hierarchy in Attachment 2 can be used to create a framework for a program with multiple functions and project purposes that span each step within the hierarchy.

- **Beneficially Reuse Lake Ontario Dredged Material.** When sediment is dredged by the US Army Corps of Engineers from the hardened channels of embayments on the southern shore of Lake Ontario, this sediment – which typically is valuable coarse sediment that could rebuild shorelines – is required to be wastefully dumped in the deep lake because it is the lowest-cost disposal alternative. In order to use this sediment to replenish the longshore current, now starved of sediment by shoreline hardening, the Corps needs a cost-share partner to enable the more expensive step of placing the sediment in the near-shore zone where currents can take it to rebuild beaches that can protect property. $10 million would allow regional dredging to work with the Corps and contractors to place this valuable sediment where it can rejoin coastal processes and help rebuild Lake Ontario shoreline.

Lake Champlain Watershed Culvert Project Description

Northern New York Resilient Culverts Project

Northeastern New York: Clinton, Essex, Franklin, Warren, and Washington Counties

Project Need: $50 Million

New York State experienced four record-breaking floods between 2011 and 2013, causing billions of dollars in damage. Culverts, the structures that carry streams underneath roads, are often at the epicenter of flooding and infrastructure failure. Right-sizing these structures is a value-added proposition: each dollar spent provides multiple benefits, bolstering community resilience to flooding, ensuring roads stay open and safe while saving road maintenance dollars, and improving habitat for fish and wildlife.

Project Description

In every part of the United States, road-stream crossings are an essential element of transportation networks. Communities depend upon functioning road networks and safe crossings. Undersized and poorly designed culverts fill with water and clog with debris during storms, causing flooding and damage to roads. In addition, poorly designed road-stream crossings have negative health and environmental impacts such as reducing water quality and fragmenting steams, resulting in disruption to the natural movement of water, sediment, fish and other organisms. Rural areas are particularly susceptible to economic, environmental, and public safety risks caused by inadequate road-stream crossings.

The proposed project would fund the replacement of undersized and poorly designed road-stream crossings in a 3,000 square-mile area of northeastern New York State, which has more than 5,400 miles of rivers and streams. This region was devastated by Tropical Storm Irene, which resulted in major damage to road and culvert infrastructure in local communities most of which have very limited resources for road repair.

This project would allocate $50 million across the region to replace prioritized road-stream crossings with designs that mitigate future flood damage, improve safety on local road networks, reduce maintenance costs for communities, improve water quality, and ensure ecosystem connectivity. **Each $1 million of financial assistance would fund upgrading 2-8 culvert sites**. In addition, the project provides a model for removing regulatory barriers, implementing modern transportation planning, and achieving multiple goals in a cost-effective way.

Primary Benefits

- Protection of ecosystem function by connecting rivers for the benefit of fish and wildlife
- Protection of water quality
- Reduction of local flood damage
- Improvement of safety and mobility by ensuring that high flows do not result in culvert failure and road closures
- Reduction of routine maintenance and unplanned repair costs (a hardship to small communities with limited tax base)
- Enhancement of river-based recreation economies that rural communities depend on
- Local job creation (primarily construction industry)

Suffolk County Freshwater culvert prioritization

Road name, creek name, coordinates:

- Crossing on Motts Brook at South Country Rd in Brookhaven
  (40.76272721, -72.93125232)

- Crossing on Stillman Creek at Middle Rd in Brookhaven
  (40.74267917, -73.03849486)

- Crossing on West Brook at Hwy 27 A in Islip
  (40.74417703, -73.15653994)

- Crossing on Seatuck Creek at Old County Road in Southampton
  (40.83362271, -72.72501631)

- Crossing East River at Montauk Hwy in Southampton
  (40.82353372, -72.71633644)

- Crossing on Alewife Creek at North Sea Rd in Southampton
  (40.92714165, -72.41500905)

- Crossing on Trues Creek at Montauk Hwy in Islip
  (40.69756853, -73.2818713)

- Crossing on Orowoc Creek at Sunrise Highway in Islip
  (40.74006735, -73.22500035)

- Crossing on the tributary to Pipe's cove at Main Rd (Hwy 25) in Southold
  (41.08885761, -72.39122005)

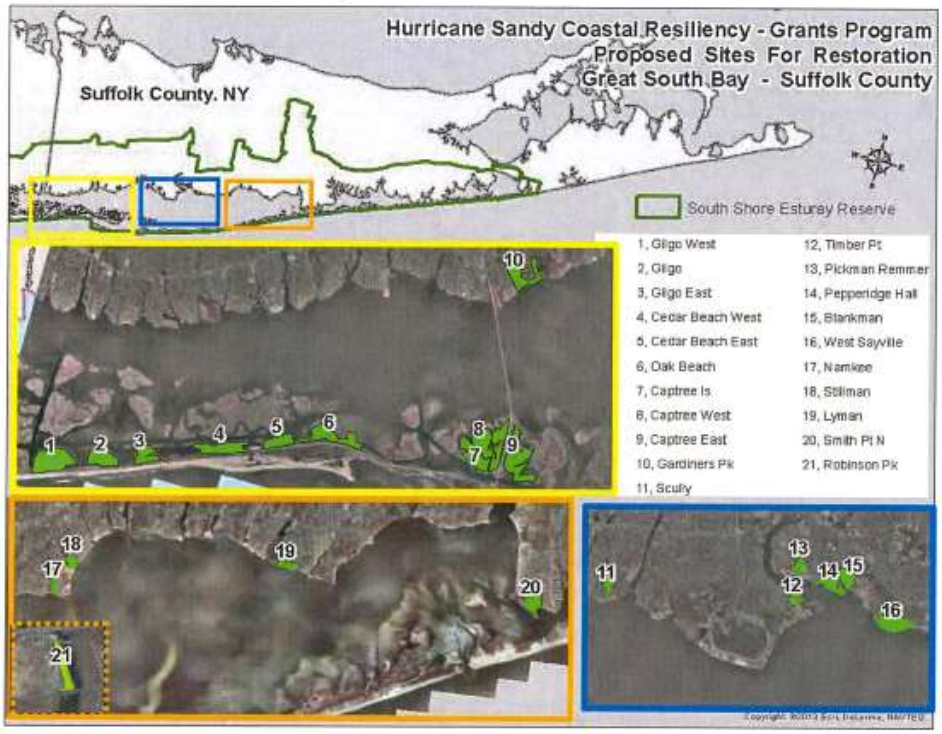
- Crossing on Hedges Creek at South Country Road in Brookhaven
  (40.75625124, -72.96163617)

- Crossing on Whitcom Marsh Stream at Main Road (Hwy 25) in Southold
  (41.1519526, -72.27795408)

NOTES:
Tidal crossings and railroad crossings currently being assessed.
Tidal data to be available within the next 60-90 days. (October 30, 2019 status)

Suffolk County: 21 south shore south shore properties with potential for restoration

Supplemental Figure S1.A. Proposed Sites for Assessment and Restoration.



Supplemental Figure S1.B. Proposed Sites for Assessment and Restoration. Western area.

Supplemental Figure S1.C. Proposed Sites for Assessment and Restoration. Middle area.

Hurricane Sandy Coastal Resiliency - Grants Program
Proposed Sites For Restoration
Middle section Great South Bay - Suffolk County

Suffolk County Department of Economic Development and Planning, Water Quality Division

Supplemental Figure S1.D. Proposed Sites for Assessment and Restoration. Eastern area.

New York City Sand Enhancement Project Opportunities

Note: These are only projects NYC Parks has scoped sites and areas for work. We know opportunities exist over at least double the acreage, particularly in Jamaica Bay.

SiteName	ActivityName	ProjectStatus	TECType	RestComplexity	Acres	CostEstimate
Alley Pond Park West Pools	Sand Nourishment	Field Verified	Coastal Wetland	Medium	0.39	$440,362.10
Broad Channel	Sand Nourishment	Field Verified	Coastal Wetland	Low	0.03	$34,852.46
Four Sparrow	Sand Nourishment	Concept Design	Coastal Wetland	High	0.38	$466,122.24
Hutchinson River	Sand Nourishment	Field Verified	Coastal Wetland	Medium	0.36	$404,002.61
Idlewild	Sand Nourishment	Field Verified	Coastal Wetland	High	0.97	$1,190,153.43
Idlewild	Sand Nourishment	Concept Design	Coastal Wetland	High	3.31	$4,059,331.06
Idlewild	Sand Nourishment	Field Verified	Coastal Wetland	High	4.12	$5,060,106.43
Idlewild	Sand Nourishment	Field Verified	Coastal Wetland	High	1.50	$1,836,827.21
Idlewild	Sand Nourishment	Desktop Opportunity	Coastal Wetland	High	0.72	$881,944.10
Lemon Creek	Sand Nourishment	Field Verified	Coastal Wetland	High	2.70	$3,315,281.91
Neck Creek West	Sand Nourishment	Desktop Opportunity	Coastal Wetland	Medium	0.24	$265,755.33
Pelham Bay Cove	Sand Nourishment	Field Verified	Coastal Wetland	High	0.19	$437,907.10
Pelham Bay Cove	Sand Nourishment	Field Verified	Coastal Wetland	High	0.19	$234,320.77
Saw Mill Creek	Sand Nourishment	Field Verified	Coastal Wetland	Medium	0.61	$682,827.36
Seagirt Avenue / Bridge Creek Wetlands	Sand Nourishment	Desktop Opportunity	Coastal Wetland	Low	0.03	$34,536.86

Spring Creek	Sand Nourishment	Desktop Opportunity	Coastal Wetland	Medium	0.26	$289,383.47
Spring Creek	Sand Nourishment	Desktop Opportunity	Coastal Wetland	Medium	0.41	$454,143.26
Spring Creek	Sand Nourishment	Desktop Opportunity	Coastal Wetland	Medium	0.44	$491,657.40
Spring Creek	Sand Nourishment	Desktop Opportunity	Coastal Wetland	Medium	1.01	$1,132,264.81
Turtle Cove	Sand Nourishment	Desktop Opportunity	Coastal Wetland	Low	0.52	$521,307.02
Turtle Cove	Sand Nourishment	Desktop Opportunity	Coastal Wetland	Medium	0.26	$291,291.33
Turtle Cove	Sand Nourishment	Desktop Opportunity	Coastal Wetland	Medium	4.44	$4,959,603.33
Goose Pond Marsh	Sand Nourishment	Desktop Opportunity	Coastal Wetland	High	10.74	$17,985,228.82
TOTALS					33.82	$45,469,210.38